

  
*Wharfedale*  
*Pro*

# **Titan™ 12 Active**

**PROFESSIONAL ACTIVE SPEAKER SYSTEM**



**OWNER'S MANUAL**

# Titan™ I2 Active

## OWNER'S MANUAL

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# Titan™ I2 Active

## UNPACKING

All Wharfedale Pro products are fully checked before leaving the factory. After unpacking, inspect the contents for any physical damage. Retain the shipping carton and internal packing material. Check as soon as possible that the unit is functioning properly. In the event of any shipping damage, please contact your dealer and the shipper immediately to make a claim.

## WARNING AND SAFETY INSTRUCTIONS

1. **READ INSTRUCTIONS** carefully before operating this product.
2. **RETAIN** these instructions for future reference.
3. **COMPLY WITH WARNINGS** – All warnings and instructions for this product should be adhered to.
4. **SETUP PROCEDURES** – In order to avoid speaker damage, it is advisable to establish and follow a pattern for powering on and off any sound system. Make sure that all input and output level controls are at their minimum settings on all components of the system. With all system parts connected, power on source equipment (playback units, instruments, mixers, signal processors, etc.), **BEFORE** powering on the active speakers. Power on the active speakers **LAST**. Wait until all system components have stabilized, then bring up volume controls to operating level. Similarly, when shutting a system down, always turn down the active speaker input controls and then turn off the active speakers **BEFORE** shutting down other system components.
5. **CABLES** – Be sure to use proper shielded signal cables for all line level and microphone level connections to and from the active speakers.
6. **RIGGING – SUSPENDING – MOUNTING** The rigging, suspension or mounting of this speaker system can expose members of the public to serious health risks and even death. **UNDER NO CIRCUMSTANCES ATTEMPT TO RIG, SUSPEND OR OTHERWISE MOUNT THIS SYSTEM UNLESS YOU ARE FULLY QUALIFIED AND CERTIFIED TO DO SO BY RELEVANT LOCAL, STATE AND NATIONAL AUTHORITIES. ALL RELEVANT SAFETY REGULATIONS MUST BE FOLLOWED. IF YOU ARE NOT PROPERLY QUALIFIED OR DO NOT KNOW OF PERTINENT REGULATIONS, CONSULT QUALIFIED PERSONNEL FOR ADVICE AND ASSISTANCE.**
7. **CAUTION** – These professional loudspeaker systems are capable of generating very high sound pressure levels. Use care with placement and operation to avoid exposure to excessive sound levels that could cause permanent hearing damage.
8. **SERVICING** – The user should not attempt to service this product. Please contact your local Wharfedale Pro Service Center.

# Titan™ 12 Active

## INTRODUCTION:

### TITAN™ 12 ACTIVE 2-WAY POWERED LOUDSPEAKER

Congratulations! You've made the smart move of choosing the new Wharfedale Pro Titan™ 12 ACTIVE, a lightweight and powerful active two-way loudspeaker designed to produce high quality audio in any performance application.

A preeminent force in audio, with a long and distinguished history of innovation, Wharfedale Loudspeakers was founded in 1932 by Gilbert Briggs, who built his first loudspeakers in a small village in the county of Yorkshire, England. This quiet market town was located in the valley of the river "Wharfe" – an area known to this day as "Wharfedale".

A visionary in the field of loudspeaker technology, Briggs developed the first two-way loudspeaker – essentially the prototype of the modern loudspeaker. Today, as part of International Audio Group, Wharfedale continues to grow as an international standard for professional loudspeakers.

In keeping with Gilbert Brigg's original vision, all of our transducer components are engineered, tooled, and manufactured in our 1,500,000 square foot facility. In fact Wharfedale is one of only a handful of manufacturers who still build all of their own transducers.

All of which helps to explain how the new Titan™ 12 ACTIVE combines the newest technologies, materials and design topology to ensure absolute accuracy, high output and the smooth, wide dispersion of the critical mid and high frequency ranges.

Because of its functional cabinet design, the Titan™ 12 ACTIVE is versatile and easily mounted in a variety of configurations. At home indoors or outdoors, on stage, in studios, in clubs, at rehearsals, in theaters and houses of worship, the Titan™ 12 ACTIVE will provide the high standards of audio reproduction that you require.

# Titan™ 12 Active

## WHARFEDALE PRO LIMITED WARRANTY

Wharfedale Pro Titan™ 12 ACTIVE loudspeakers systems are warranted to be clear of manufacturing or material defects for a period of one year from the original date of purchase. In the event of malfunction, contact your authorized Wharfedale Pro dealer or distributor for information.

\*Be aware that warranty details may differ from country to country. Contact your dealer or distributor for information. These terms do not infringe your statutory rights.



Wharfedale Pro website: [www.wharfedalepro.com](http://www.wharfedalepro.com)

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# **Titan™ 12 Active**

## **Titan™ 12 Active Feature Set**

- 2-way, active bi-amplified speaker system
- State-of-the-art, high efficiency switch mode power supply with a class D low frequency power amplifier and a class A/B high frequency amplifier
- Low frequency power (Class D) 250W RMS, 500W PEAK
- High frequency power (Class A/B) 50W RMS, 100W PEAK
- Active signal limiting system with LED indicator on rear panel
- Power 'ON' LED indicators inside of the high frequency horn throat and on the back panel
- Built in 2 channel mixer with microphone and line level inputs
- Balanced XLR line output for connections to subwoofers or daisy-chaining units together
- Switchable Bass Response Optimizer (BRO™) circuit
- Lightweight enclosure with rubberized transport handles for easy portability
- High density mineral loaded injection moulded polypropylene enclosure
- Ten M8 threaded insert rigging points
- Low distortion, high power handling, water resistant 12 inch woofer
- Professional high frequency compression driver with 2" titanium diaphragm
- Standard 35mm integral speaker stand socket and bottom mounted bracket inserts
- XLR and TRS line inputs via convenient 'combo' jacks
- Two band master EQ controls
- Full Protection system: DC, overload, short circuit, thermal, On / Off mute and LF / HF Limiters

# Titan™ 12 Active

## Titan™ 12 ACTIVE DESCRIPTION

### TRANSDUCERS

The Titan™ 12 ACTIVE features a custom designed, heavy-duty 12” low frequency driver precisely matched to a high frequency 2” Titanium compression driver with integral bi-amplification. Both drivers are designed for maximum output, wide dispersion and precise audio signal reproduction.

### AMPLIFIER

The Titan™ 12 ACTIVE features a state-of-the-art Class D low frequency amplifier design. Class D amplifiers are known for their extended efficiency, low heat dissipation and light weight compared to other amplifier classifications. Class D technology allows for unparalleled audio quality in a lightweight, powered speaker system. High frequency power is provided by a high quality, low distortion and highly efficient Class A/B amplifier.

### MIXER and CONTROLS

The Titan™ 12 ACTIVE provides basic mixing functions with a variety of input options. Two inputs with separate level controls and a common equalization section allow for overall balance and tonal characteristic control. Easy interfacing to external mixers and processors provide for easy expansion to larger, more sophisticated systems.

### ELLIPTICAL WAVE GUIDE™

Our unique EWG™ design is the result of intensive computer modeling of natural acoustic wave propagation. To provide more acoustically transparent high-frequency pattern control, hard edges, corners, and parallel surfaces were eliminated from the design while still enabling 90 x 60 degree high frequency coverage. The smoother, more “organic” shape of the EWG™ design reduces high frequency distortion and diffraction eliminating acoustic artifacts found in other horn design technologies. The result is smoother frequency response, greater driver efficiency, and improved vocal and instrument reproduction.

### PRACTICAL FEATURES

Designed for flexibility and ease of use, the Titan™ 12 ACTIVE also features a unique **BASS RESPONSE OPTIMIZER**, or “**BRO**™ circuit” that works like the “loudness” controls on vintage stereo systems. With the “**BRO**”™ circuit engaged, low frequency response increases as the overall volume is decreased providing for outstanding low frequency response at lower volume levels.

# Titan™ 12 Active

## Titan™ 12 ACTIVE DESCRIPTION (cont.)

A top stacking feature is provided for multi-loudspeaker applications and the Titan™ 12 ACTIVE also can be used on its side as a stage monitor. The speaker stand receptacle features a locking screw to ensure stability and rubber-padded carry handles make the job of transporting the enclosure easier than ever.

Cord wrap and cable anchor features are also moulded into the enclosure. Ten M8 threaded rigging points are provided for a variety of safe flying configurations with four of these inserts available, bottom-mounted, in an OmniMount® 60.0 bracket footprint.

## OPTIONAL ACCESSORIES

**WALL MOUNT BRACKET** – Enables surface mounting of the Titan™ 12 ACTIVE for fixed installations with pan and tilt positioning.

**TITAN™ TOUR BAG** – Ballistic nylon zippered carry bag protects your Titan™ 12 ACTIVE and features a storage pocket for cables.

## ENCLOSURE FEATURES

- Proprietary 90° x 60° Elliptical Wave Guide™ horn design
- Custom 12" Low Frequency driver and Titanium High Frequency compression driver provide exceptional clarity, high power handling capability and maximum efficiency
- Protective metal grille
- Rugged Polypropylene injection moulded cabinets with rubberized over-molded handles and multiple M8 rigging points including wall mount bracket inserts
- Trapezoidal shape allows for vertical arrays as well as horizontal stage monitor applications
- Integral tripod stand adapter
- Power on indicator in horn throat and on rear panel



# Titan™ 12 Active

## Titan™ 12 ACTIVE - Front Panel Features

### 1. High frequency driver and power on indicator

The high frequency driver is a custom designed 2" titanium compression driver. A circular blue power 'ON' indicator is embedded in the throat of the horn. (There is an additional power 'ON' LED indicator on the rear panel).

### 2. Elliptical Wave Guide™

The EWG™ design is designed to provide acoustically transparent high frequency pattern control. This EWG™ waveguide (horn) enables a 90 x 60 degree high frequency coverage.

### 3. Ports

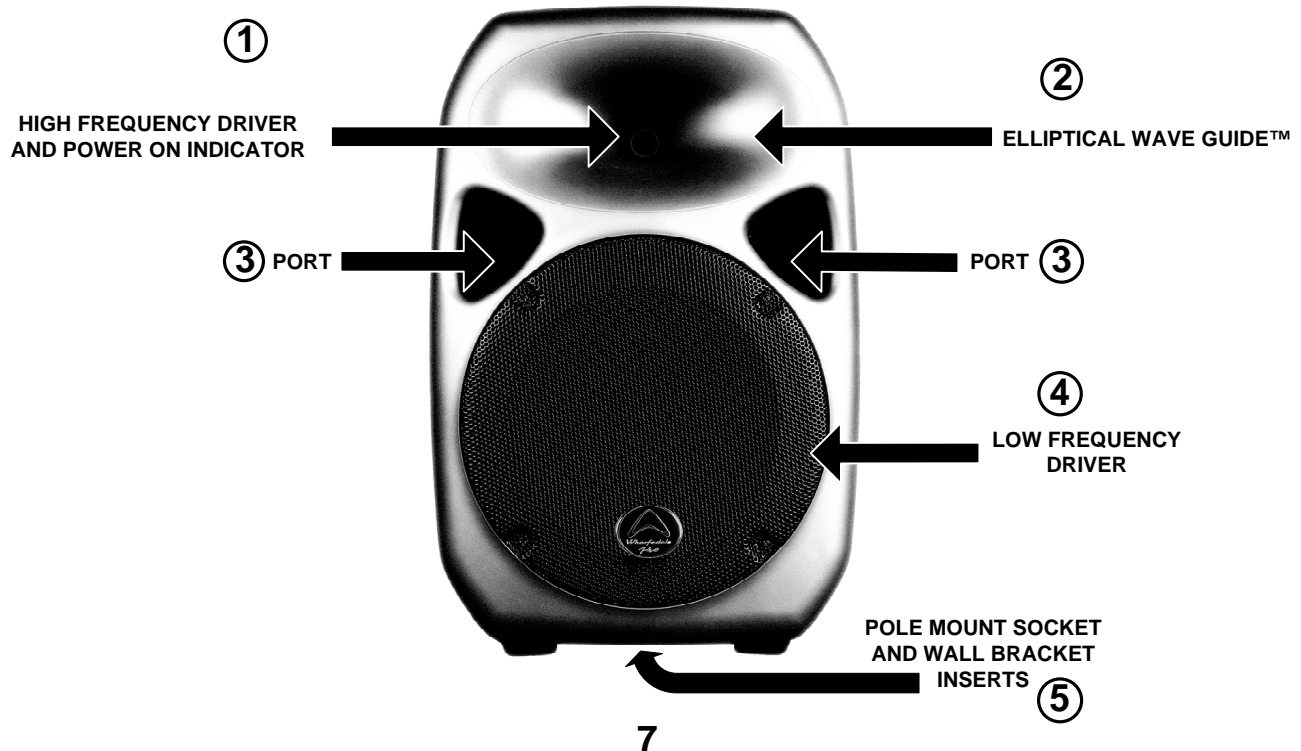
There are two ports on front of the Titan™ 12 ACTIVE that are reflex tuned to provide enhanced low frequency response from the enclosure.

### 4. Low frequency driver

The low frequency driver is a custom designed, high quality 12" loudspeaker.

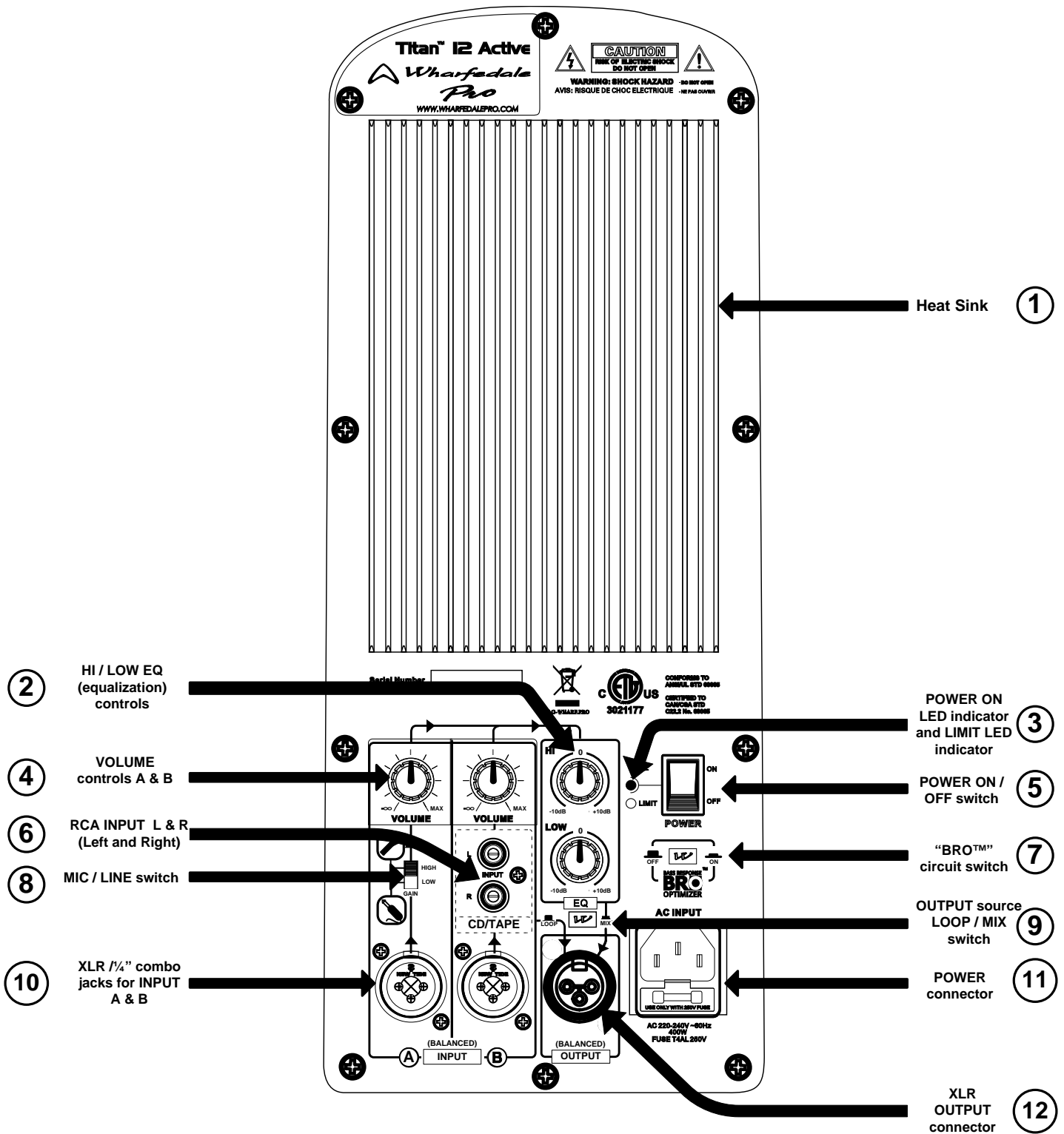
### 5. Pole mount socket and bracket attachment

The bottom of the Titan™ 12 ACTIVE provides a convenient built in pole mount socket for easy mounting on a standard 35mm diameter speaker stand pole. Four threaded inserts for a wall mount bracket are also provided on the bottom of the enclosure.



# Titan™ 12 Active

## Titan™ 12 ACTIVE REAR PANEL LAYOUT



# Titan™ 12 Active

## Titan™ 12 ACTIVE Rear Panel Features

- 1. Heat Sink:** The heat sink allows for dissipation of heat build up from the amplifier via air cooling at the rear of the enclosure.
- 2. HI and LOW EQ (equalization) controls:** These knobs control the equalization of the overall output signal providing +/- 10dB in each frequency range.
- 3. POWER 'ON' indicator LED and LIMIT indicator LED:** The bracketed LED to the left of the **POWER** switch illuminates when the power switch is in the '**ON**' position. The **LIMIT** LED illuminates when the signal limiter is actively limiting the level of the signal to prevent distortion and overload.
- 4. VOLUME controls for INPUT A and INPUT B:** These knobs control the volume of each input channel.
- 5. POWER ON / OFF switch:** This switch turns the power on and off.
- 6. RCA L / R (Left and Right) input jacks:** These jacks provide for the input of a stereo signal (left and right). The signal is actively combined or "summed" providing a mono signal to the amplifier.
- 7. "BRO™" Bass Response Optimizer circuit switch:** The **BRO™** circuit, when engaged, allows for enhanced low frequency response at lower volume levels.
- 8. GAIN selection switch:** This switch selects the proper gain structure for **INPUT A**. If a microphone is connected to **INPUT A**, use the **HIGH** selection (up). If the signal source is anything other than a microphone (playback device, keyboard or mixer output, for instance) use the **LOW** selection (down).
- 9. Output source "LOOP / MIX" switch:** In the "**LOOP**" mode, this switch routes the signal of **INPUT B** to the line level XLR **OUTPUT** jack, bypassing the **EQ** section and volume control. When in the **MIX** mode, this switch routes the combined (or "mixed") signals of both **INPUT A** and **INPUT B** to the line level XLR **OUTPUT** jack.
- 10. XLR / ¼" COMBO input jacks for INPUT A and INPUT B:** These convenient jacks provide for either XLR or ¼" balanced input connections to **INPUT A** and **INPUT B**.
- 11. POWER cord jack:** This is a jack for a standard IEC, three prong, grounded AC electrical connection cord. Be sure that you are plugging into the correct source voltage that matches what is indicated just below the power cord jack.
- 12. XLR line level OUTPUT jack:** This jack provides a balanced line level output of **INPUT A** and **INPUT B** signals (in **MIX** mode) or **INPUT B** signal only (in **LOOP** mode) for connection to additional Titan 12 ACTIVEs, powered subwoofers or amplifiers.

# Titan™ 12 Active

## Titan™ 12 ACTIVE Operating Instructions

The Titan™ 12 ACTIVE is nearly as easy to use as it is to move around. The steps below should be followed to help you get the best out of your speaker system.

-Place the Titan™ 12 Active on a speaker stand, set it upright or place it on its side (if being used as a floor monitor) and connect the power cable. Be sure to allow for adequate ventilation for the heatsink on the rear panel.

-Make sure that the volume knobs for **INPUT A** and **INPUT B** are turned all the way down and that all audio connections are made *BEFORE* turning on the power switch of the Titan™ 12 Active.

-Turn on the power switch and, with a suitable signal source (such as the output of a mixer, talking into a microphone, playing an instrument or signal from a playback unit), gradually turn up the volume control for the appropriate input to a comfortable level, being careful that input signals are not distorting or creating feedback.

-Make any necessary tonal adjustments for the performance environment with the **LOW** and **HI EQ** controls and the **BRO™** circuit (if applicable).

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## CONNECTION SUGGESTIONS

There are many creative ways to connect and use the Titan™ 12 ACTIVE. The following pages show some suggestions for a few simple system configurations that can be used. Variations on these suggestions can be easily developed to meet your specific needs.

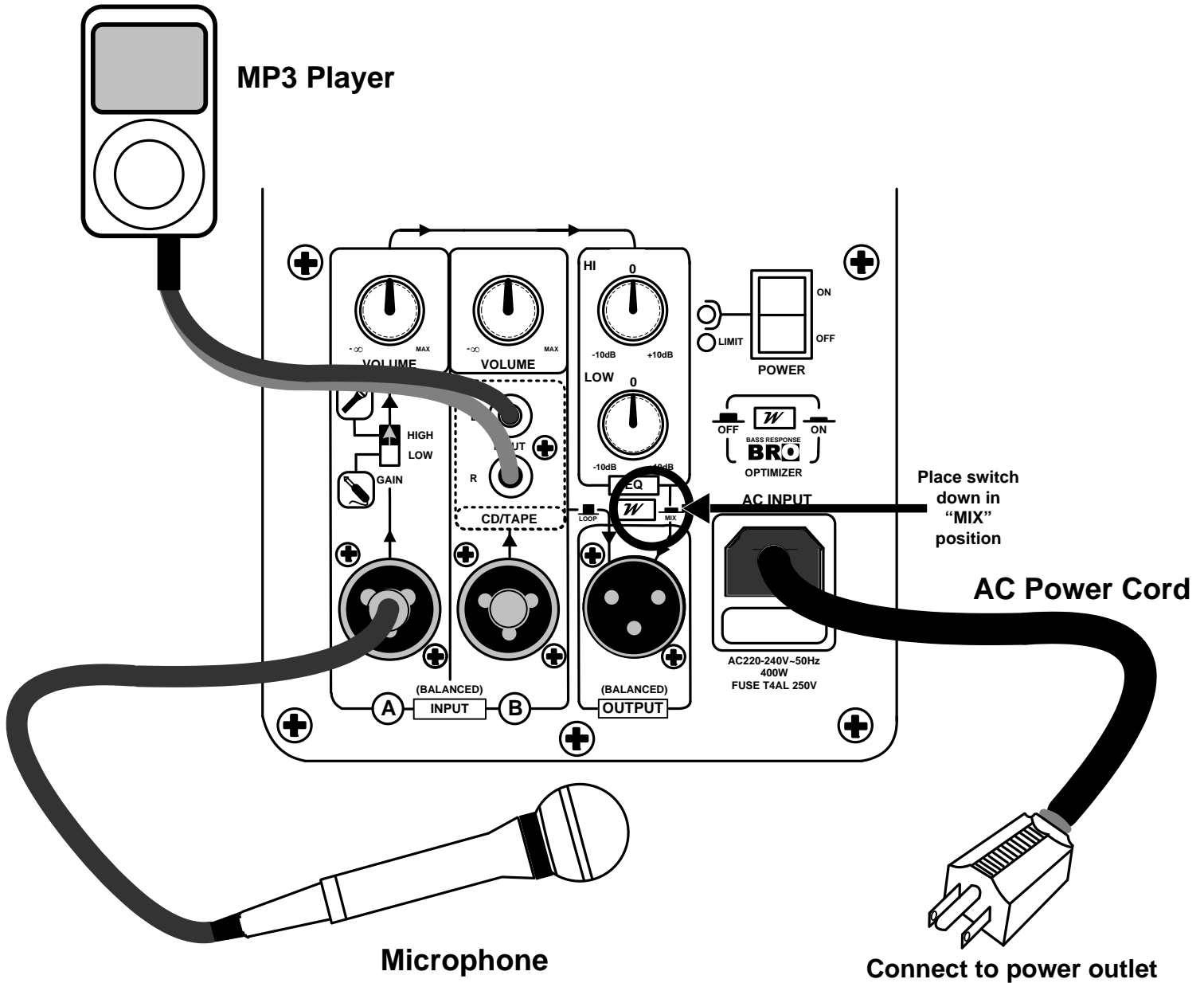
CONNECTION #1 shows a very basic setup using a single microphone and a MP3 player connected to a single Titan™ 12 ACTIVE. In this configuration, the **GAIN** selection switch needs to be in the “**HIGH**” position (up). The MP3 player is connected to the dual RCA jacks of **INPUT B**.

CONNECTION #2 shows how to “daisy-chain” the output of one Titan™ ACTIVE to the input of another. In this particular configuration, the input source can be a microphone or the output of a mixer connected to **INPUT A**. This setup would require the proper setting of the **INPUT A “GAIN”** switch depending on the type of signal source that is used.

# Titan™ I2 Active

## CONNECTION DIAGRAM #1

### Basic microphone / playback hookup

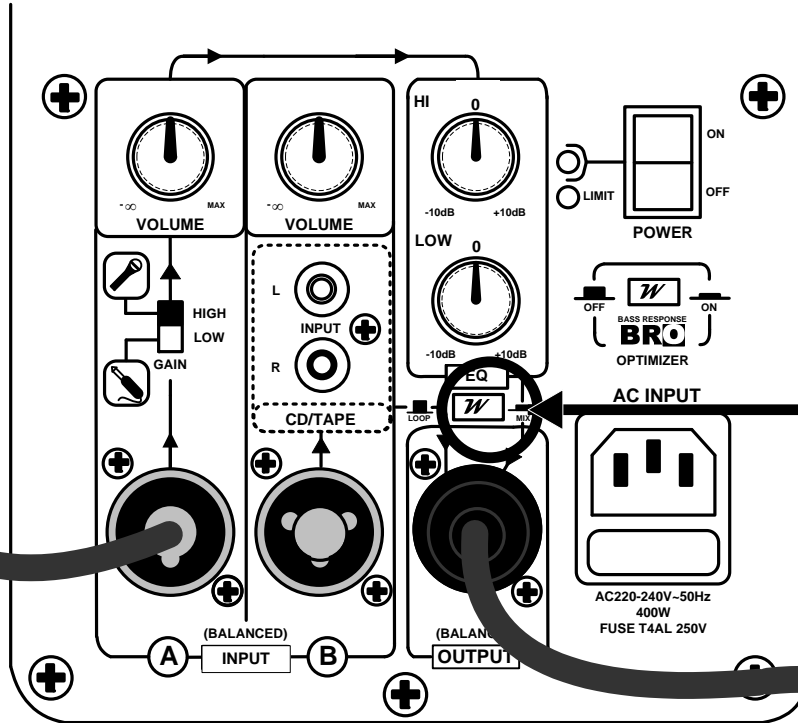
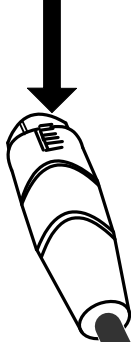


# Titan™ 12 Active

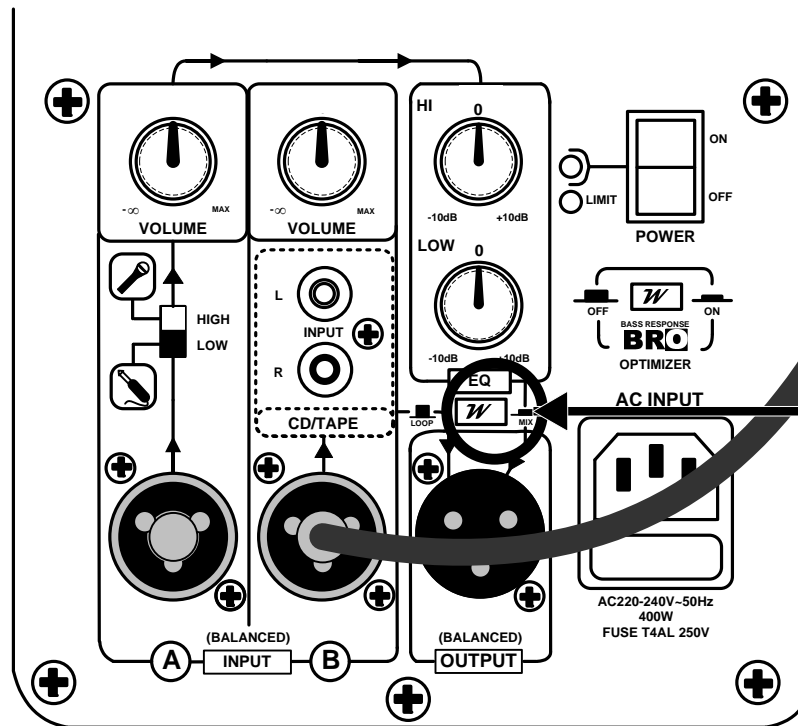
## CONNECTION DIAGRAM #2

### Connecting two Titan 12 ACTIVE speakers together

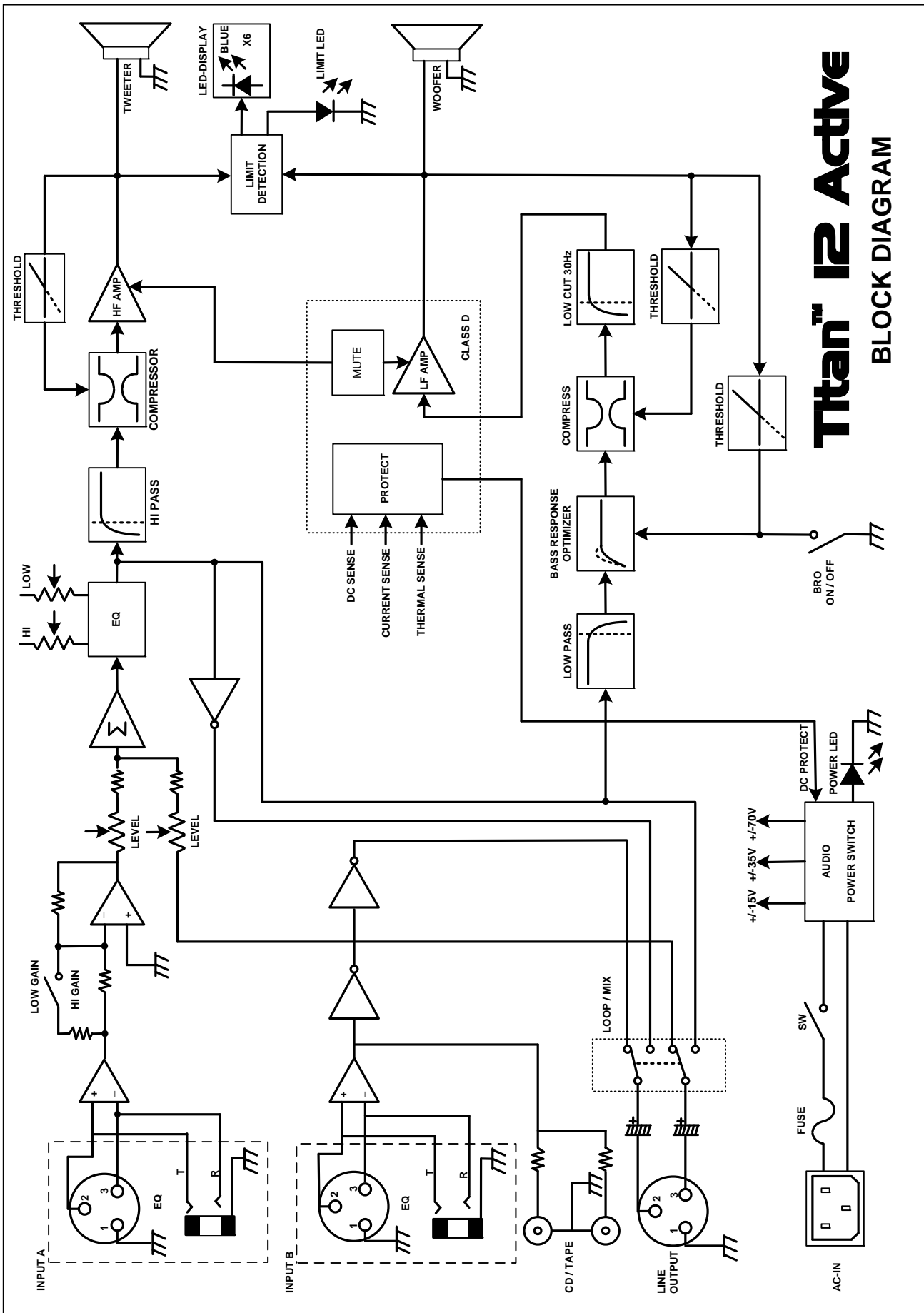
Input 1 from a microphone or  
the output of a mixer  
(Be aware of MIC/LINE switch setting!)



Place switch down in  
"MIX"  
position



Place switch down in  
"MIX"  
position



# Titan™ 12 Active

## BLOCK DIAGRAM

# Titan™ 12 Active

## SPECIFICATIONS

### Model Name

System Type  
Frequency Response (+/-3dB)

### Titan™ 12 ACTIVE

Active 12" 2-way Bi-Amplified system  
55-20kHz

### Low Frequency Transducer

Size (mm / inches)  
Coil Size (mm / inches)  
Impedance

305mm / 12"  
64.26mm / 2.5"  
4 Ω

### High Frequency Transducer

Type  
Coil Size (mm / inches)  
Exit Size (mm / inches)  
Diaphragm Material  
Impedance  
High Frequency Coverage (H x V)

Compression Driver  
51mm / 2"  
25mm / 1"  
Titanium  
8 Ω  
90° x 60°

### Amplifiers

Low-Frequency Power Amplifier (Class D)  
High-Frequency Power Amplifier (Class A/B)

Rated 250W RMS, 500W Peak  
Rated 50W RMS, 100W Peak

### Electronic Crossover:

Crossover Frequency

24dB per octave Linkwitz-Riley  
2.3kHz

### Controls

Equalization:

Bass Response Optimizer ("BRO"<sup>™</sup>) circuit  
Subsonic Filter

High (±10dB) 10kHz Shelving  
Low (±10dB) 100Hz Shelving  
+5dB at 60Hz  
30Hz, Second-order filter

### Amplifier Protection

Power On Protection  
Thermal Protection  
Low Line Voltage Shut Down  
Driver Protection  
DC Protection  
Short Protection  
Clip Limiter:  
Limiter Indicator

Power switch on / off mute  
Amplifier shutdown, auto reset  
60% Nominal line voltage  
Independent LF and HF limiters  
Yes  
Yes  
Turns on approx 250W output  
Red LED

### Inputs

Input A – type  
Input Sensitivity  
  
Maximum Input Level  
Input Connector  
Input Impedance  
Maximum Input Level

Switchable balanced mic or line level input  
Mic: -36dBu (-38.2dBv or 12.28mVrms)  
Line: +4dBu (1.78dBv or 1.228Vrms)  
+22dBu  
XLR / ¼" Combo jack  
Balanced: 20kΩ - Unbalanced: 10kΩ  
+22dBu

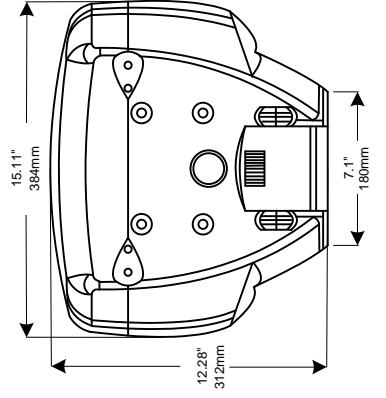
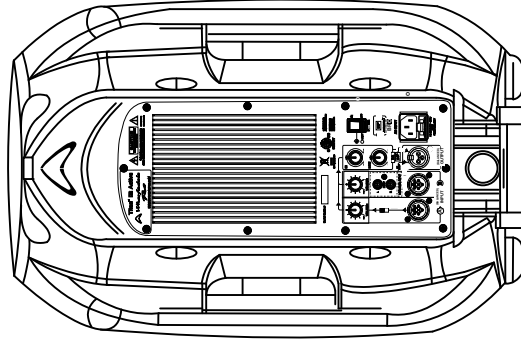
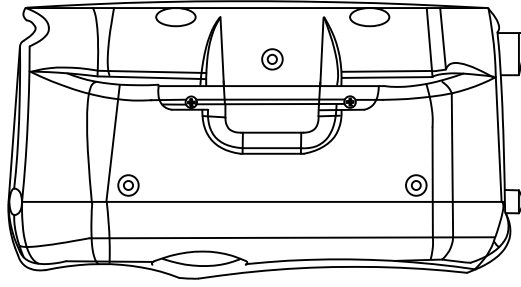
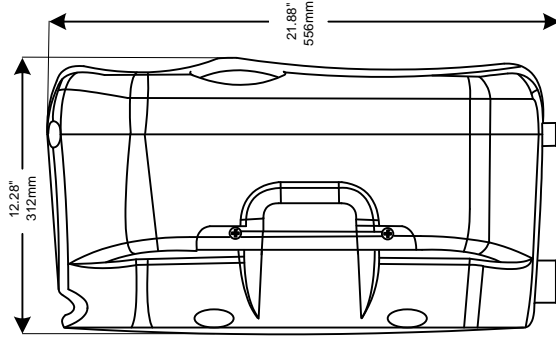
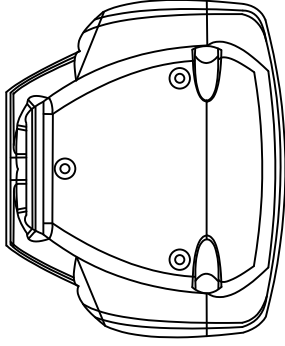


# Titan™ I2 Active

## SPECIFICATIONS (cont.)

Input B – type	Line level input
Input Sensitivity	XLR / ¼" Combo jack: 1.78dBv or <b>1.228</b> Vrms
Maximum Input Level	RCA: 0dBu (-2.2dBv or 0.775Vrms)
Input Connectors	+22dBu
	Combo jack: 1/4" - XLR / Summed dual RCA jacks
<b>Line Output</b>	
Line Output Connector	Switchable LOOP / MIX Balanced Male XLR Connector
Impedance	Balanced: 1k ohm – Unbalanced: 500 ohm
Sensitivity	+4dBu (1.78dBv or 1.228Vrms)
<b>AC Power details</b>	
Power Supply	High Efficiency Switching Mode Power Supply
AC Power Options	AC100~120V / 220~240V, 50 / 60Hz
Power On Indicator	LED
<b>Rigging / Bracket / Mounting Options</b>	
	10 M8 threaded inserts including 4 M8 threaded inserts on bottom in OmniMount 60.0-type footprint
	Pole-mount receptacle with lock screw
	2 carry handles (one on each side)
	Optional wall-mount bracket
<b>Enclosure</b>	
Enclosure Material	Injection Moulded Polypropylene
Colour	Grey or white
Dimensions (mm / inches):	
H	556mm / 21.88"
W (Front / Back)	384mm / 15.11" - 180mm / 7.1"
D	312mm / 12.28"
<b>Weight</b>	
Net Weight (kg / lbs)	12.8kg / 28.16lbs
Gross Weight (kg / lbs)	14.8kg / 32.56lbs

Details, features and specification are subject to change without notice



# Titan™ 12 Active

## DIMENSIONS



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